

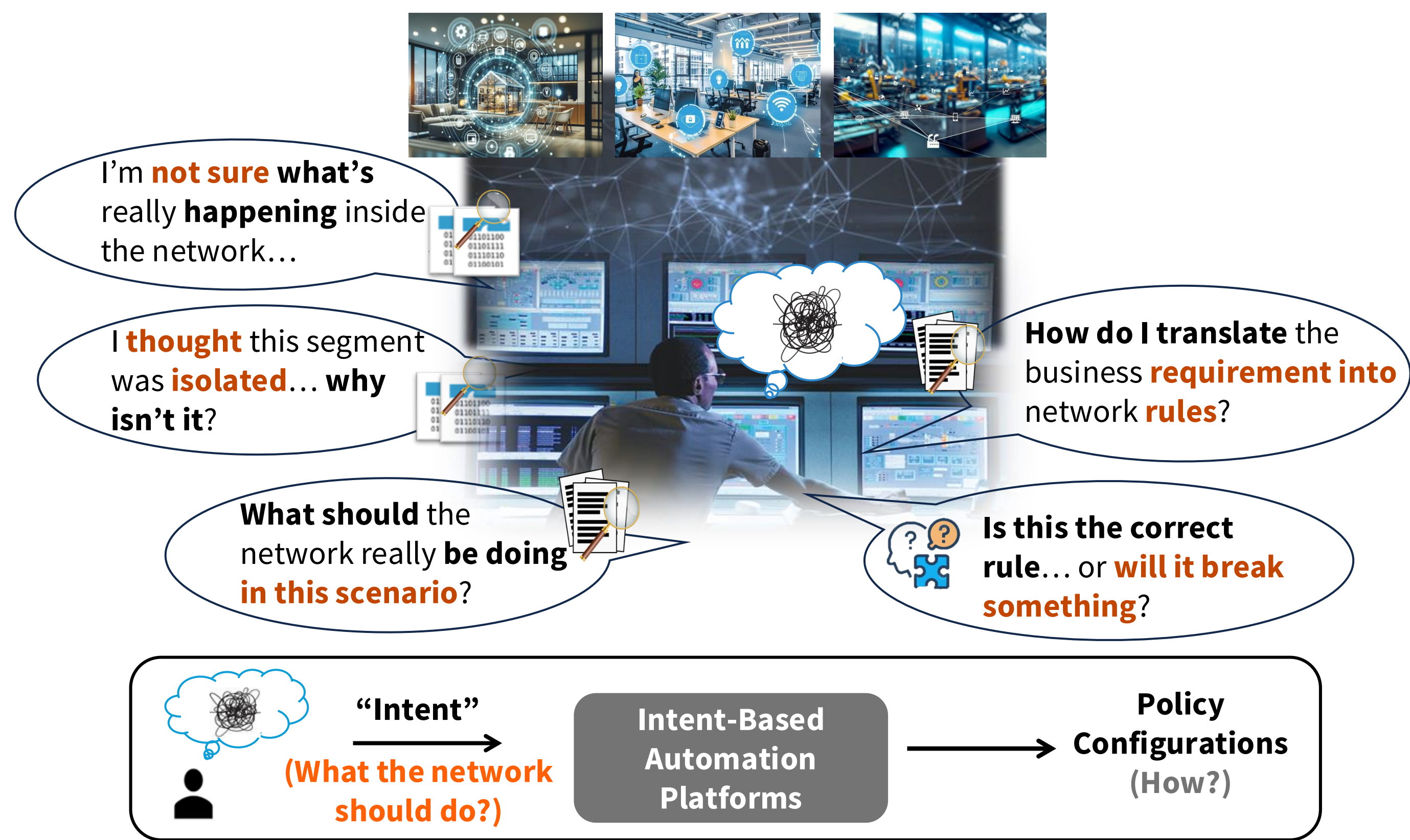
IntentRx: A Smarter, More Reliable Way To Interact With Your Network

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Background & Motivation

- Modern networks are highly complex, making it difficult for operators to reason about system-wide behavior.
- While Intent-Based Networking (IBN) automates configuration, it assumes operators already know the correct intents.
- There is currently limited support for systematically discovering and validating intents from observed network behavior.

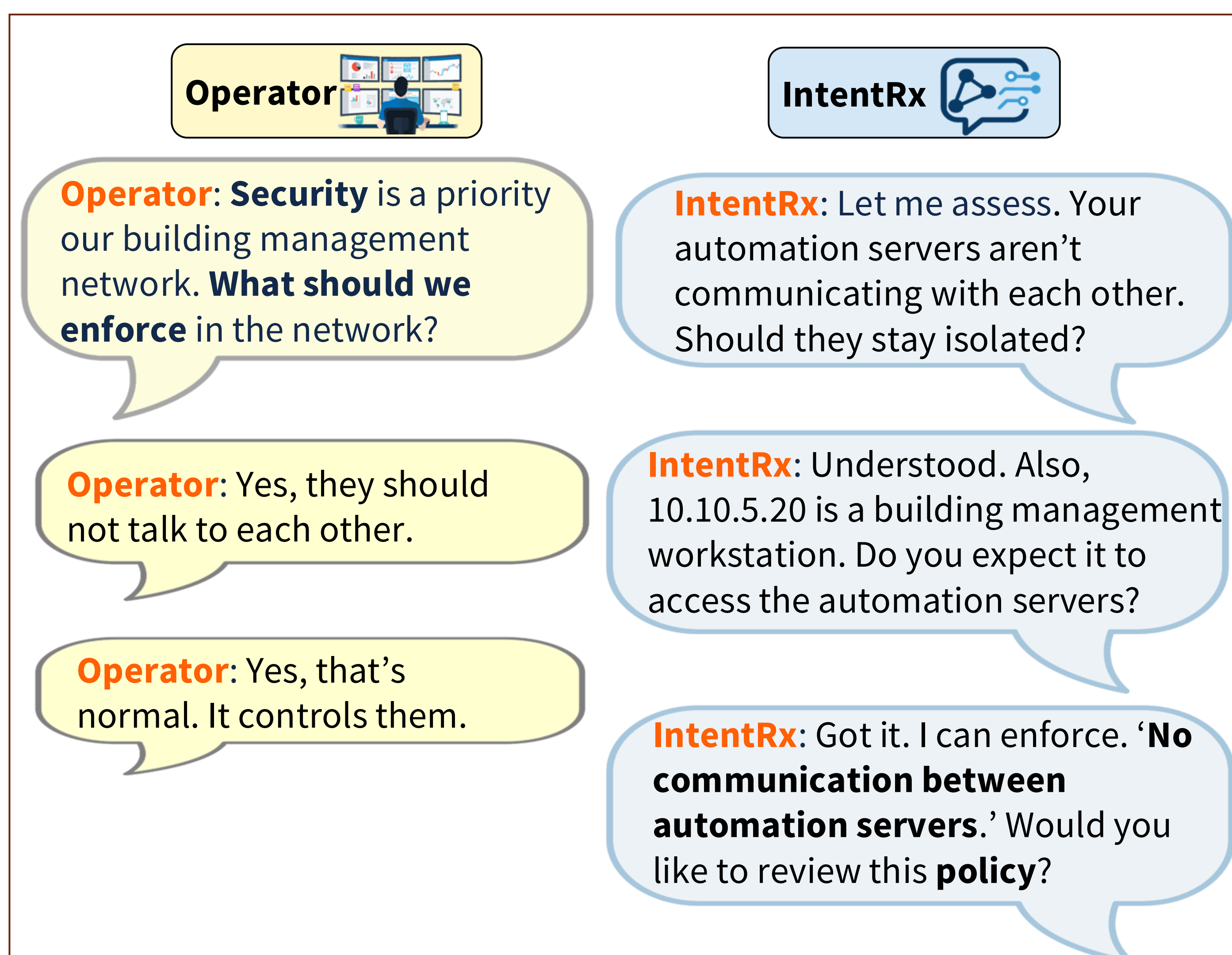


Vision: What if operators could just "talk to their network" and get clear, reliable answer?

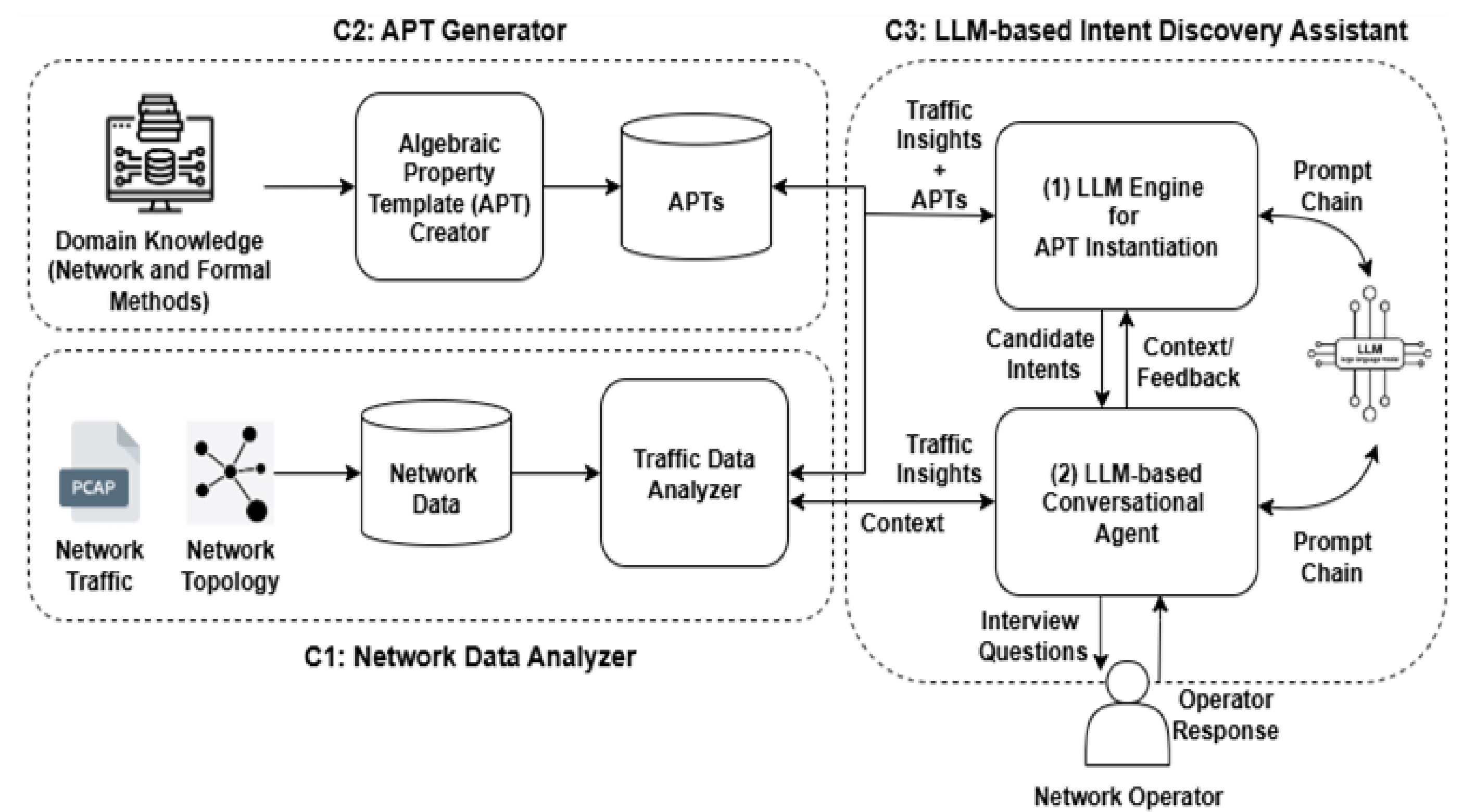
Key Features

- Natural Language Interactions**
Enable operators to interact in natural language with context-aware follow-up questions that guide intent generation.
- Policy Recommendation**
Analyze network data to identify risks, then recommend actions or network policies that align with the operator's concerns.
- Reliable Assistance**
LLM interactions are backed by correctness-guaranteed domain reasoning and verification to overcome hallucinations.

Sample Conversation

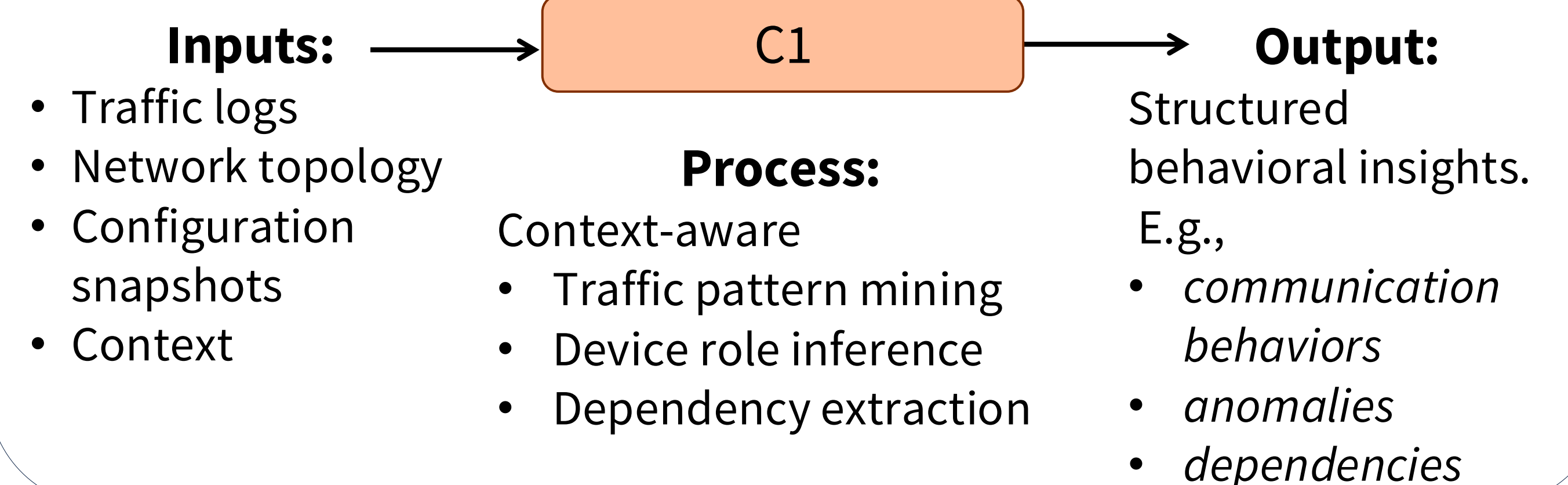


Proposed Approach



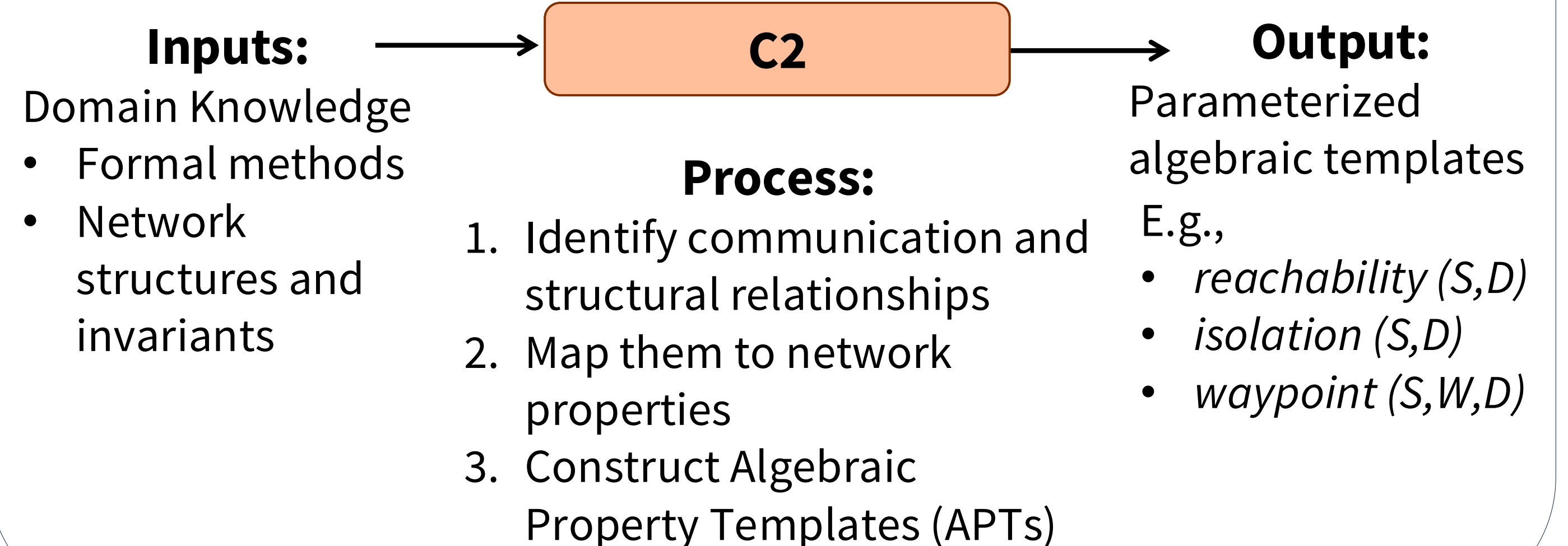
1) Network Data Analyzer (C1):

Goal: Extract contextual insights from network behavior.



2) APT Generator (C2):

Goal: Represent network structures and behaviors using reusable mathematical templates.



3) LLM-based Intent Discovery Assistant (C3):

Goal: Infer and validate operator intents using AI + formal reasoning.

